AMENDMENTS TO THE CLAIMS:

Please replace the claims with the claims provided in the listing below wherein status, amendments, additions and cancellations are indicated.

1. (Currently amended) A coke oven door to promote temperature rise in [[the]] a vicinity thereof, comprising; ~~which comprises~~

a heat-insulating box provided on [[the]] an inner side of an oven door structure adapted to open and close a door jamb in the coke oven charged with coal particles via a seal plate pressed against said door jamb[[,]];

horizontal support frames fitted to a coking chamber side of the heat-insulating box and spaced apart with spaces therebetween ~~provided~~ to partition [[the]] a height of said heat-insulating box into multiple sections[[,]]; and

a bottom-less gas migration and isolation chamber ~~formed by arranging~~ formed by shield bars arranged ~~to prevent the entry of coal particles,~~ laterally and vertically ~~with small ventilating spaces left on both sides thereof,~~ to [[fill]] span the spaces between said horizontal support frames and so arranged with ventilating spaces being present between laterally adjacent ones of said shield bars, said ventilating spaces being sufficiently small to prevent passage of coal particles, ~~with the~~ an upper end ~~thereof~~ of each of the shield bars being pivotally fastened to said horizontal support frames.

2. (Currently amended) A coke oven door ~~to promote temperature rise in the vicinity thereof~~ according to claim 1, ~~in which~~ wherein adjoining ends of at least a portion of the shield bars ~~to prevent the entry of coal particles~~ which are arranged on the coke oven side of the bottom-less gas migration and isolation hollow plug are joined by stepped joints, with ~~small~~ said ventilating spaces left therebetween.

3. (Currently amended) A coke oven door ~~to promote temperature rise in the vicinity thereof~~ according to claim 1, ~~in which the~~ wherein mating ends of vertically adjacent ones of said shield bars which include a lower end of [[said]] an upper shield bar of said vertically adjacent ones of shield bars and [[the]] an upper end of [[said]] a lower shield bar of said vertically adjacent ones of said shield bars which is mounted vertically below said upper shield bar are movably joined together by forming notched cross-sections, with a notched mating groove directed toward said gas migration and isolation hollow plug provided on one of the mating ends and a loosely fitting projection on ~~the~~ an other of the mating ends.

4. (Currently amended) A coke oven door to promote temperature rise in [[the]] a vicinity thereof, comprising: ~~which comprises~~

a heat-insulating box provided on [[the]] an inner side of an oven door structure adapted to open and close a door jamb in the coke oven charged with coal particles via a seal plate pressed against said door jamb[[.]];

horizontal support frames fitted to a coking chamber side of the heat-insulating box and spaced apart with spaces therebetween to partition a height of said heat-insulating box into multiple sections; and

shield bars ~~upper shield bars~~ fitted in the spaces ~~in said heat-insulating box partitioned by~~ between said horizontal support frames and arranged with ventilating spaces being present between laterally adjacent ones of said shield bars, said ventilating spaces being sufficiently small to prevent passage of coal particles, said shield bars including upper shield bars each having a slot extending in [[the]] a direction of oven height and provided in [[the]] a mating surface of [[the]] a lower end thereof, said shield bars further including lower shield bars each having a downward-extending projection adapted to pass through and ~~engaging~~ engage with said slot and a projecting stopper in a lower position thereof adapted to come in contact with the lower end of an associated one of said horizontal support frames ~~frame provided in the lower end thereof~~.

5. (Currently amended) A coke oven door to promote temperature rise in [[the]] a vicinity thereof, comprising: ~~which comprises~~

a heat-insulating box provided on [[the]] an inner side of an oven door structure adapted to open and close a door jamb in the coke oven charged with coal particles via a seal plate pressed against said door jamb[[,]];

horizontal support frames having a rugged engaging portion at [[the]] an upper edge thereof which include recesses on both sides of a projection, said horizontal support frames being spaced apart with spaces therebetween ~~and provided~~ to partition [[the]] a height of said heat-insulating box into multiple sections[[,]]; and

a bottom-less gas migration and isolation hollow plug formed by putting together shield bars, both vertically and laterally, to span the spaces between said horizontal support frames and so arranged with ventilating spaces being present between laterally adjacent ones of said shield bars, said ventilating spaces being sufficiently small to prevent passage of coal particles, said shield bars having two separated hooks adapted to engage with the ~~dents~~ recesses on both sides of [[a]] said projection on said horizontal support frame by stepped joints~~, with small ventilating spaces provided on both sides thereof~~ and vertical sliding spaces on [[the]] a projecting side of both stepped joints, and a projecting stopper to prevent [[the]] breakoff of [[the]] a one of the shield [[bar]] bars by coming into contact with said horizontal support frame provided in [[the]] a lower part of the shield bar.

6. (Currently amended) A coke oven door ~~to promote temperature rise in the vicinity thereof~~ according to claim 1, ~~in which~~ wherein said heat insulating box

includes a cast-iron box containing a heat-insulating material which is provided between the oven door structure and the bottom-less gas migration and isolation hollow plug.

7. (Currently amended) A coke oven door ~~to promote temperature rise in the vicinity thereof~~ according to claim 1, ~~in which~~ further comprising one or more vertical nozzle pipes which are separately provided in the bottom-less gas migration and isolation hollow plug, each of said vertical nozzle pipes comprising a gas nozzle in the upper part, a coal dust chute in the lower part, a combustion gas supply pipe communicating with a combustion gas supply source provided therebetween,.

8. (Currently amended) A coke oven door to promote temperature rise in [[the]] a vicinity thereof, comprising: ~~according to claim 1, in which~~

a heat-insulating box provided on an inner side of an oven door structure adapted to open and close a door jamb in the coke oven charged with coal particles via a seal plate pressed against said door jamb;

horizontal support frames spaced apart with spaces therebetween being provided to partition a height of said heat-insulating box into multiple sections;

a bottom-less gas migration and isolation chamber formed by shield bars arranged laterally and vertically to span the spaces between said horizontal support frames and so arranged with ventilating spaces being present between laterally

adjacent ones of said shield bars, said ventilating spaces being sufficiently small to prevent passage of coal particles, an upper end of each of the shield bars being pivotally fastened to said horizontal support frames; and

one or more combustion gas injection nozzles [[are]] being separately provided in the bottom-less gas migration and isolation hollow plug, each of said combustion gas injection nozzles comprising a combustion gas nozzle pipe having, in [[the]] a gas flow passage thereof, a nozzle directed toward the bottom-less gas migration and isolation hollow plug at one end thereof and a downward opening shutter adapted to close a gas passage in the combustion gas supply pipe connected to a combustion gas supply source at [[the]] an other end thereof, a cylinder fastened to the uppermost point of said combustion gas nozzle pipe, said downward opening shutter movably connected via a movable connecting rod to a rod connected to the coke oven side of a piston reciprocating in said cylinder, and a gas flow pipe connecting the combustion gas pipe nozzle between said nozzle and downward opening shutter and the oven door side of said cylinder.

9. (Currently amended) A coke oven door ~~to promote temperature rise in the vicinity thereof~~ according to claim 1, ~~in which~~ further comprising one or more combustion gas nozzle pipes which are separately provided in the bottom-less gas migration and isolation hollow plug, each of said combustion gas injection nozzles comprising a combustion gas nozzle pipe having in the gas flow passage thereof a

nozzle directed toward the bottom-less gas migration and isolation hollow plug at one end thereof and a downward opening shutter adapted to close a gas passage in the combustion gas supply pipe connected to a combustion gas supply source at the other, an ovally shaped annular member ~~whose~~ including an upper end which tilts toward a combustion gas supply source and lower end toward the nozzle, and a downward opening shutter closing an opening in said annular member from the side of the nozzle.

10. (Currently amended) A coke oven door ~~to promote temperature rise in the vicinity thereof~~ according to claim 8, ~~in which~~ further comprising a tar reservoir communicating with the combustion gas passage at one end and having a closing lid at [[the]] an other end being disposed ~~is provided~~ below one or more combustion gas supply [[pipe]] pipes or combustion gas nozzle [[pipe]] pipes separately ~~separated~~ provided in the bottom-less gas migration and isolation hollow plug.